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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/037,048	12/31/2001	Robert C. Lawson	10541-887	5565
29074	7590	01/21/2004	EXAMINER	
BRINKS HOFER GILSON & LIONE			BUTLER, DOUGLAS C	
P.O. BOX 10395			ART UNIT	
CHICAGO, IL 60611			PAPER NUMBER	

3683

DATE MAILED: 01/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/037,048

Applicant(s)

LAWSON, ROBERT C.

Examiner

Douglas C. Butler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 5-15 is/are rejected.
- 7) ☒ Claim(s) 2-4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. In view of applicant's position that the inventions are not patentably distinct, the examiner accepts applicant's arguments and withdraws the restriction requirement.
2. An action on the merits of claims 1-15 is included in this office action.
3. The insert to page 1 of the specification should be amended to include SN. 09/870, 251 and its patent no. 6,530,587.
4. All references cited in the parent applicant SN 09/870,251 have been considered.
5. Applicant should maintain a clear line of patentability between the instant claims and the claims present in the parent application.
6. The change of Address filed June 13, 2003 has been received.
7. The drawings filed June 20, 2002 appear acceptable.
8. Fig. 1a should be labeled as "Prior Art".
9. Claim 1, last line "resin" should be change to --resin material--.  
  
Claim 1, line 6 and claim 7, line 5 "braid" should be charged to --pre-braided-- to be consistent with claim 1, line 5 and with claim 7, line 4, respectively.  
  
Claim 15, line 4 "substantially" is misspelled.
10. All submitted prior art has been considered. Many of the submitted documents appear to be included in the British search report found in GB 2375502 published Nov. 20, 2002 which was published before the IDS filed March 10, 2003. The examiner discovered the existence of the British report during examination and notes that the submitted IDS failed to acknowledge the existence of the British report. A supplemental

statement should be submitted correcting the record. Applicant should inform the USPTO if other reports have been rendered whether published or not.

11. Discussion of GB 2375502 Search Report

A. Rogers et al (US 5619903) is cited as a category X and Y reference. In the examiner's view, neither a method of manufacturing a transverse leaf spring (instant claims 1-14) nor the product of a transverse leaf spring are disclosed by Rogers et al. Column 1, lines 14-20 of Rogers et al discuss sailboat hulls and "stealth" aircraft; but Rogers et al do not mention the field of leaf spring technology. No suggestion, teaching or motivation exists for modifying the teachings of Rogers et al to apply them to leaf springs. The British report refers to column 3, lines 57-66. However, the indicated reference does not refer to leaf springs.

B. Thompson et al (US 4412965) is referred to as a category Y type reference. Thompson et al lack any reference to the leaf spring art. The reference does not appear to be of interest in the instant application.

C. JP 80039580 cited as a category Y reference does not appear to be pertinent in that it is not directed to the leaf spring art.

D. Re. JP 570116610 to Ebata et al, Fig. 1 there of includes a mold 5a, 5b and separate resin tank 4.

E. Claims 1 and 7 are not rejectable in view of Ebata et al in view of the last three steps of claims 1 and 7 which claim that the spring is formed by injecting resin into the mold.

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12. A new or substitute declaration is required which makes reference to both domestic applications 60/215, 422 filed June 30, 2000 and 60/276, 370 filed March 17, 2001. Also, the parent application must be identified in the declaration.

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 1, 5-6, 7-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Woltron (4659071).

Woltron et al (4659071) is directed to a method of making a transverse hollow leaf spring including forming means 27, fiberglass/resin application at 35, molding at 40, 41.

15. Claim 15 is rejected under 35 U.S.C. 102(b) as being anticipated by Woltron (US 4688778).

Figs 1-6 of Woltron discloses a transverse leaf spring with tapered, pivoted ends, a hollow interior filled with core material 24 and a braided fiber structure with resin configuration.

16. Claim 15 is rejected under 35 U.S.C. 102(b) as being anticipated by JP 57-109612 to Hori et al.

Note hollow leaf spring in Figs. 2-3, 6-9 of Hori et al impregnated with fibers and resin.

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17. Claim 15 is rejected under 35 USC 102(b) as being anticipated by submitted GB 2021731 to Bennett et al.

The leaf spring of Fig. 2 of Bennett et al has a braided fiber structure 18, 19 integrated with resin, hollow interior at 20 filled with fibers and tapered ends.

18. Claims 11-14 are rejected under 35 USC 102(b) as being anticipated by submitted JP 570116610 to Ebata et al.

Instant claim 11 recites three steps, providing a braided fiber structure, integrating a resin material into said fiber structure and curing said shape.

Note the following Abstract from Derwent database as to Ebata et al:

Purpose: To obtain a leaf spring light in weight and excellent in torsional rigidity through an integrated continuous process and on a large scale, by producing a hollow part in the interior of an FRP plate spring.

Constitution: Robing fibers 1 consisting of a bundle of a plurality of single fibers for reinforcement are woven into a tubular body 2, and a resilient tubular sheet 3 is inserted into the tubular body 2.

Then, the tubular body 2 with the sheet 3 inserted therein is immersed in a thermosetting resin contained in a resin tank 4 to impregnate the body 2 with resin, and the resin is hardened under pressure and heating in a mold 5a, 5b while applying an internal pressure to the interior of the tubular sheet 3 by using air or the like. After the resin is hardened, the formed body is separated from the mold and the internal pressure is eliminated. Accordingly, a hollow leaf spring of reinforced plastic can be obtained continuously.

It appears that the providing a braided fiber structure is disclosed at 1, 2 of Fig. 1 of Ebata et al. The integrating resin step is disclosed at 4 of Fig. 1 of Ebata et al. The curing said shape is performed by the mold at 5a, 5b.

19. Claims 11-14 are rejected under 35 USC 102(b) as being anticipated by submitted Jarret et al (US 4611792).

Re the step of "curing said shape", see column 3, lines 66-68 of Jarret et al. The providing a fiber structure and integrated a resin material steps appear to be met by Jarret et al as per column 3, line 27 to column 4, line 22.

20. Claims 2-4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Exmr. Butler whose telephone number is (703) 308-2575. Although the examiner may not always be present in his office to immediately answer the phone when called, the examiner will make every effort to return the call as soon as possible. If the examiner does not answer his phone, the examiner suggests that a brief message be recorded on the examiner's voice mail machine when necessary and appropriate. The examiner normally checks recorded phone calls at least once a day unless on leave.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9326. Examiner Butler's immediate supervisor is Jack Lavinder at (703) 308-3421.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

*DC Butler* 1/14/2004  
DOUGLAS C. BUTLER  
PRIMARY EXAMINER  
*AU 3663*

Butler/vs  
January 8, 2004